



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

July 7, 1995

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Reply To
Attn Of: HW-124

Program Management

Ms. Lisa Green, Manager
Environmental Restoration Program
U. S. Department of Energy
Idaho Operations Office
850 Energy Drive
Idaho Falls, Idaho 83401-1563

Re: EPA Comments on Assessment of Surface Soils Surrounding the
SL-1 Burial Ground

Dear Ms. Green

The U.S. Environmental Protection Agency (EPA) has reviewed the document entitled "Assessment of Surface Soils Surrounding the SL-1 Burial Ground" along with the engineering design file (EDF) entitled "ARA Windblown Area Risk Evaluation" and is providing the enclosed comments.

If you have any questions about these comments please call me at (206) 553-6903.

Sincerely,

Howard Orlean
WAG 5 Project Manager

cc: Alan Jines, DOE-ID
E. Jean Underwood, DEQ-Boise
Wayne Pierre, HW-124

Enclosure

Comments:

EPA has several questions and concerns pertaining to the apparent use by DOE of the EDF for long-term remedial decisions related to the Auxiliary Reactor Area (ARA) and SL-1 burial ground.

1. It appears from the conclusions of the EDF that DOE has established a "site-wide" PRG for cesium. EPA understands that DOE is undertaking a removal action at OU 10-06 where soils are being targeted with Cs-137 levels in excess of about 17 pCi/g. The 17 pCi/g concentration corresponds to a residential risk of 3×10^{-3} starting 100 yrs from today. The WAG 10 managers have agreed to 100 yr residential as the proper scenario, but they have not agreed to 3×10^{-5} as a clean-up level. The WAG managers will need to determine what the appropriate PRG for the ARA and SL-1 areas should be.
2. While under certain specific circumstances where the main pathway of concern is external exposure (e.g. Cs-137 contamination via windblown deposition) it may be appropriate to use field measurements to determine risk. However, under most circumstances laboratory measurements would be the more appropriate means. The uncertainties with respect to the use of field measurements to determine risk should be discussed.
3. The EDF appears to try to establish site-wide background concentrations for radiation. While this a laudable exercise, it is one that will need buy-in from all the WAG and Project Managers and as presented in both the EDF and the "Assessment of Surface Soils Surrounding the SL-1 Burial Ground" (Assessment) is flawed. A serious concern with respect to the risk estimates for the windblown areas, is that there is no calculated risk for external exposure. The EDF merely states that dose equivalent rates around ARA did not exceed background (page 10 of the Assessment). This indicates a problem with the way background was determined, and/or a problem with the way the dose equivalent rates were measured. The concentration data shows Cs-137 at 135 pCi/g (Table 4 of the Assessment). There is no argument presented in the Assessment that this concentration is "below background". In this case the external exposure risk should be calculated based on the concentration data. The estimate presented in the EDF of a site-wide background dose rate, used to screen out a number of areas, seems high compared to other estimates of natural background for Idaho that EPA is familiar with. This is an important issue because the "background" level of external exposure represents a high risk.